

# TECH TALK

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## **Dibond® for Workzone Safety Signage**

As a result of increased fatalities around highway work zone areas, the Federal Highway Administration (FHWA) issued an addendum to the National Cooperative Research Program (NCHRP) Report 350 that identifies new test criteria for work zone safety signage. The new criteria went into effect in October 2000 and requires work zone safety signage to be tested in a full scale vehicle crash. The test is designed to evaluate both the signage material and the sign stand. The new pass/fail criteria are severely limiting the use of standard signage materials such as aluminum due to failed crash tests. As a result, the highway signage industry has been searching for new signage materials in order to pass the new requirements of NCHRP 350.

To gain entrance into the highway safety signage market, Alcan Composites USA Inc. conducted a test per the NCHRP 350 protocol using 2 mm Dibond® material and an "A" type portable sign frame. Results of the crash test showed that Dibond® material and the sign stand passed all of the necessary criteria outlined in the NCHRP 350 protocol. The FHWA issued a formal acceptance letter in June of 2001. The approval letter states that the test result "allows the FHWA to consider Dibond®, Alpolite, and Reynolds Metals products equivalent when substrates are of the same thickness." The report also states that Dibond®, Alpolite, and Reynolite "may be used interchangeably on work zone traffic control devices which have been acceptable for use on Test Level 3 devices on the National Highway System under the range of conditions tested, when proposed by a State."



Since the initial crash test, several major roadway sign manufacturers have tested Dibond® material on a variety of sign stands including breakaways, “X” footprint, and tripods. The FHWA has approved Dibond® material for use with these sign stands. For a complete list of approved stands, please see the FHWA Website. For specific sign/sign stand combinations that have not been tested per the NCHRP 350 protocol, a simple letter to local Federal Highway Administration officials may qualify the sign for use in work zone areas, particularly if it is similar in structure to stands that have already been approved.

In addition to the FHWA approvals, Dibond® has also been tested with various reflective sheeting products. The following table lists the reflective sheeting manufacturer recommendations:

<b>Manufacturer</b>	<b>Brand Name</b>	<b>Grade Level (if applicable)</b>
<b>3M</b>	Scotchlite	Engineer
	Scotchlite	High Intensity
	Scotchlite	Diamond
<b>Avery Dennison</b>	W-6242	
	W-6243	
	W-6244	
	W-6245	
	W-7514 PG	
<b>Nippon Carbide</b>	Nikkalite ULG II	N 500 Series
	Nikkalite ULG II	N 800 Series